

REMARKS/ARGUMENTS

In view of the foregoing amendments and the following remarks, the applicants respectfully submit that the pending claims are not anticipated under 35 U.S.C. § 102. Accordingly, it is believed that this application is in condition for allowance. **If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicants respectfully request that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.**

The applicants will now address each of the issues raised in the outstanding Office Action.

Objections

The title, abstract and claims 1-2 and 4-8 have been objected to due to minor informalities. The title has been amended to more clearly describe the invention. The abstract has been amended to conform to proper language and format requirements. Claim 1 has been amended to replace "said output signal reading means" with "said means of reading output signals" to provide proper antecedent basis. Claims 2-8 have been amended to correct antecedent basis problems. Accordingly, the applicants submit that these objections have been overcome and respectfully request that the Examiner withdraw these objections.

Claims 3-8 were objected to as being dependent upon a rejected base claim but were found to include allowable subject matter and would be allowable if rewritten in independent form. Accordingly, claims 3, 5, 6 and 8 have been rewritten in independent form as suggested and are allowable. Claims 4 and 7 depend upon claim 3 (amended) and 6 (amended), respectively, and are therefore also allowable by virtue of their dependency from an allowable claim.

Rejections under 35 U.S.C. § 102

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,707,494 ("the Misawa patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection.

The Examiner asserts that the Misawa patent discloses each of the elements of claim 1 of the present application. The Applicants respectfully disagree.

Independent claim 1 is not anticipated by the Misawa patent because it does not teach an exposure controller that **ends exposure** by control signaling resulting in the output by said driving means of said plurality of pulses driving said different sets of charge transfer gates, **wherein for a given image part, exposure ends with its corresponding charge transfer gate acting on a received corresponding driving pulse**, said plurality of pulses driving said different sets of charge transfer gates **resulting in different exposure times for at least some different sets of image parts for the same exposure setting**.

In contrast to claim 1, the exposure controller 108 of the Misawa patent ends exposure via control of shutter mechanism 112. The Misawa patent states:

The **exposure controller 108** **controls** the stop mechanism 104 and **shutter mechanism 112** in accordance with the output 24a of drive signal generating circuitry 124 which will be described later specifically. Specifically, the exposure controller 108 calculates an exposure on the basis of a photometric value from the light quality sensor 110 and delivers control signal 108a and 108b to the stop mechanism 104 and shutter mechanism 112, respectively. In response, the stop mechanism 104 and **shutter mechanism 112** respectively **set up** an aperture and a **shutter speed for implementing the calculated exposure.** The exposure controller operates under the control of a system controller which will be described specifically later. [Emphasis added.]

Column 5 lines 7-19. Thus, in contrast to claim 1 of the present invention wherein exposure is ended at slightly different times for at least some different sets of image parts, the Misawa patent controls shutter mechanism 112 to implement exposure control, which results in a uniform end time of exposure for each of the photosensitive cells. In the Misawa patent, the pulses for driving the charge transfer gates only serve to control the transfer of stored charges in the photosensitive cells to the vertical transfer elements. The Misawa patent does not disclose that the **transfer gate pulses are additionally used to end exposure for image parts** as is the case of claim 1.

Thus, claim 1 is not anticipated by the Misawa patent for at least the foregoing reason. Since claim 2 depends from claim 1, it is similarly not anticipated.

In addition, claim 1 is not anticipated by the Misawa patent because the Misawa patent does not teach a signal processing means that **adds** prescribed amounts of signal compensation, wherein each of said prescribed amounts of signal compensation is determined using the **exposure time** of the image part or parts from which the output signal is derived. To the contrary, the signal processing performed by element 120 described in the Misawa patent is described as a **modulation** to produce recordable video signal or an **amplification** to boost gain. Thus, the signal processing in the Misawa patent does **not add prescribed amounts of signal compensation**. In addition, in the Misawa patent, the signal processing is determined based upon a mode setting rather than exposure time. Specifically, the Misawa patent states:

... and then executes signal processing in accordance with a mode selection 150 included in the mode setting section 10D. Two different modes are available with the illustrative embodiment, i.e., a still picture shoot mode for recording at least a still picture picked up in a recording device 140 included in the signal output section 10C and a movie mode for simply displaying a scene in the form of a movie on a display 142 also included in the signal output section 10C.

The system controller 122 indicates the signal processing 120 the mode selected on the mode selection 150 by sending the control signal 122a thereto. In response, the signal processing 120 executes preselected

modulation with the processed signals in the still picture mode or amplifies the level of signals in the movie mode.

Column 6 lines 14- 28.

Thus, in the Misawa patent, the processing is directed to reformatting signals via modulation for recording or providing an overall scaling adjustment. The Misawa patent does not disclose adding prescribed amounts of compensation in correspondence with exposure time. Indeed, since the Misawa patent uses a shutter mechanism to concurrently end exposure for the image parts, resulting in uniform exposure times for the image parts, there is no need to compensate different groups of image parts differently based upon slight variations in exposure time.

Thus, claim 1 is not anticipated by the Misawa patent for at least this additional reason. Since claim 2 depends from claim 1, it is similarly allowable.

The Misawa patent discloses a drive method for thin-down reading using an image pickup device of four scan interlacing reading type/interline transfer type having doubled vertical resolution according to HDTV standard. That is, in the case the vertical resolution is thinned down to $1/n$, signal charges for n fields are read out at one time. However, since the maximum amount of charge per one cell in the vertical transfer path is finite, the number of thin-down was actually limited. The Misawa patent teaches a timing control system of substrate potentials or drive signals in order to moderate such limitation.

By using a simple addition compensation, the present invention permits compensation of unevenness in luminance

due to time differences during exposure among horizontal lines which occurs when staggering the TG pulse (by which exposure is ended) timing.

Thus, the Misawa patent and the present invention address different problems.

New claims

New dependent claims 12-19 depend, either directly or indirectly, from independent claim 1 and recite features that further distinguish the claimed invention over the cited prior art.

Claims 12, 13, 15 and 16 are supported, for example, by Tables 1 and 2 and their associated descriptions. Claim 14 is supported, for example, by page 13 line 24 - page 14 line 24 of the specification. Claims 17 and 18 are supported, for example, by Figure 3 and its associated description. Claim 19 is supported, for example, by page 17 lines 1-7 of the specification.

Previously Allowed Claims

The Examiner stated that claims 9-11 are allowed in their original form.

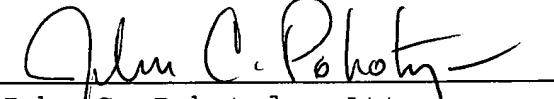
Conclusion

In view of the foregoing amendments and remarks, the applicants respectfully submit that the pending claims are in condition for allowance. The applicants note that the corresponding Japanese Patent Application No. 2000 - 378010 has been allowed and is registered as Japanese

Patent No. 3,607,866. Accordingly, the applicants request that the Examiner pass this application to issue.

Respectfully submitted,

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John C. Pokotylo, Attorney
Reg. No. 36,242
Tel.: (732) 542-9070

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John C. Pokotylo

36,242
Reg. No.